

Amendments to the Claims

This listing of claims will replace all prior versions, and listings of claims in the application.

1-46. (cancelled).

47. (currently amended) A method for synthesizing one or more cDNA molecules ~~or a population of cDNA molecules~~, comprising mixing ~~at least one~~ or more mRNA templates ~~template, or one or more poly A RNA templates~~ ~~template or population of such templates~~ with at least one polypeptide having reverse transcriptase activity and an inhibitor of the polypeptide having reverse transcriptase activity, under conditions that inhibit, prevent [[, reduce]] or ~~substantially~~ reduce the synthesis of non-specific cDNA products when compared to when said inhibitor is absent; wherein said inhibitor inhibits said reverse transcriptase activity under said conditions; and synthesizing one or more cDNA molecules ~~or a population of cDNA molecules~~.

48. (previously presented) The method of claim 47, wherein said inhibitor is an antibody or antibody fragment that inhibits said polypeptide.

49. (previously presented) The method of claim 48, wherein said antibody or antibody fragment is polyclonal or monoclonal.

50. (currently amended) The method of claim 47, wherein said inhibitor of reverse transcriptase activity prevents or inhibits reverse transcriptase activity at ~~low~~ temperatures below about 90°C.

51. (currently amended) The method of claim 47, wherein said polypeptide is a reverse transcriptase selected from the group consisting of M-MLV RT, RSV RT, AMV RT, RAV RT, MAV RT and HIV RT, and ~~derivatives, fragments, mutations and variants or~~ mutants thereof having reverse transcriptase activity.

52. (currently amended) The method of claim 51, wherein said reverse transcriptase is reduced ~~or substantially reduced~~ in RNase H activity.

53. (currently amended) The method of claim 47, wherein said conditions comprise annealing or hybridizing one or more primers to said template at temperatures that inhibit, prevent [[, reduce]] or ~~substantially~~ reduce internal priming.

54. (currently amended) The method of claim 53, wherein said temperature is within [[in]] the range of 10-90°C.

55. (previously presented) The method of claim 53, wherein said temperature is within the range of about 20-75°C.

56. (previously presented) The method of claim 53, wherein said temperature is within the range of about 45-65°C.

57. (previously presented) The method of claim 47, wherein said conditions comprise the use of a primer to template ratio between 15:1 and 1:15.

58. (previously presented) The method of claim 57, wherein said primer to template ratio is between 10:1 and 1:10.

59. (previously presented) The method of claim 57, wherein said primer to template ratio is between 5:1 and 1:5.

60. (previously presented) The method of claim 47, wherein said conditions comprise the use of a primer having a length of between 20 and 100 bases.

61. (previously presented) The method of claim 60, wherein said length is between 20 and 75 bases.

62. (previously presented) The method of claim 60, wherein said length is between 20 and 50 bases.

63. (previously presented) The method of claim 60, wherein said length is between 25 and 35 bases.

64-105 (cancelled).

106. (previously presented) The method of claim 47, wherein said polypeptide is a reverse transcriptase.

107. (previously presented) The method of claim 106, wherein said polypeptide is a retroviral reverse transcriptase.

108. (new) The method of claim 50, wherein said temperature is below about 80°C.

109. (new) The method of claim 50, wherein said temperature is below about 70°C.

110. (new) The method of claim 50, wherein said temperature is below about 50°C.

111. (new) The method of claim 52, wherein said RNase H activity is reduced to less than about 30% of RNase H activity of a corresponding wildtype reverse transcriptase.

112. (new) The method of claim 47, wherein said polypeptide is a reverse transcriptase selected from the group consisting of M-MLV RT, RSV RT and AMV RT, and said inhibitor is an antibody or antibody fragment.

113. (new) The method of claim 112, wherein said reverse transcriptase is a M-MLV RT having an RNase H activity less than about 30% of the RNase H activity of the corresponding wildtype M-MLV RT.

114. (new) Then method of claim 112, wherein said reverse transcriptase is selected from the group consisting of SuperScript™, SuperScript™ II, ThermoScript™, and ThermoScript™ II.

115. (new) The method of claim 47, wherein said one or more mRNA templates is a population of mRNA templates suitable for the production of a cDNA library.

116. (new) The method of claim 47, wherein said cDNA molecules are a cDNA library.